

PORTULACA JOHNSTONII, A NEW SPECIES OF
PORTULACACEAE FROM THE CHIHUAHUAN DESERT

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ABSTRACT

Portulaca johnstonii, distinguished by two radial series of tapering, erect fimbriae around the seeds, is described from the Bolson de Mapimi region of the Chihuahuan Desert, Coahuila, Mexico. It is most closely related to *P. retusa*.

While preparing a treatment of Portulacaceae for Marshall Johnston's Chihuahuan Desert Flora, a distinctive new species of *Portulaca* was encountered and is described below.

Portulaca johnstonii Henrickson sp. nov.

A *Portulaca retusa* siminibus ad marginem trichomatibus subulatis effusis biseriatis differt (Fig. 1).

Glabrous, fleshy, decumbent-ascending annuals 1–2 dm wide. Leaves often subopposite, ovate-spathulate, 2–14 mm long, 1–4 mm wide (to probably larger), obtuse, rounded to truncate at tip, cuneate at base, petioles 1–2 mm long, caniculate, at margins entire, axils with fimbriate white setae 0.2–0.7 mm long. Flower 1–2 at tips of lateral branches, mostly subtended by 1–2 pairs of leaves and a pair of narrowly ovate, acute-acuminate scarious bracts 1.2–3 mm long, pedicels ca. 1 mm long; petals united below, 2–3.5 mm long, yellow, lobes acute; stamens 5–8, filaments united to base of corolla for 0.5–0.7 mm, free filaments 1–1.5 mm long, puberulent above base, anthers 0.3–0.4 mm long; style 1.5 mm long, lobes 3, ca. 0.6 mm high. Fruit 3–4 mm high, circumscissile dehiscent medially, the lid widely conical, 2–3 mm broad at base, usually constricted below tip, overtopped by paired, green sepals 3–4 mm high, these dehiscing circumscissily with fruit, each with a medial vertically raised, crest-like keel; seeds 2–15, 1.3–1.6 mm in total diameter, body reddish-brown, 0.7–1 mm in diameter, compressed, with 3–4 concentric rows of low, radially elongated tubercles on each side, at margins with 2 rows of rust-colored, conspicuous, subulate, firm fimbriae 0.3–0.4 mm long, base of seed with a small white caruncle 0.1–0.2 mm long.

TYPE: México, Coahuila; Matrimonio Nuevo on road paralleling railroad between Esmeralda and Cuatro Ciénegas (near 27°08'N; 103°10'W), locally common in desert flat in gravelly calcareous adobe-clay, 1075 m, 2 Sep 1972, *F. Chiang C., T. L. Wendt, and M. C. Johnston 9125* (Holotype LL; isotype MEXU).

This distinctive species, known only from the type collection, is

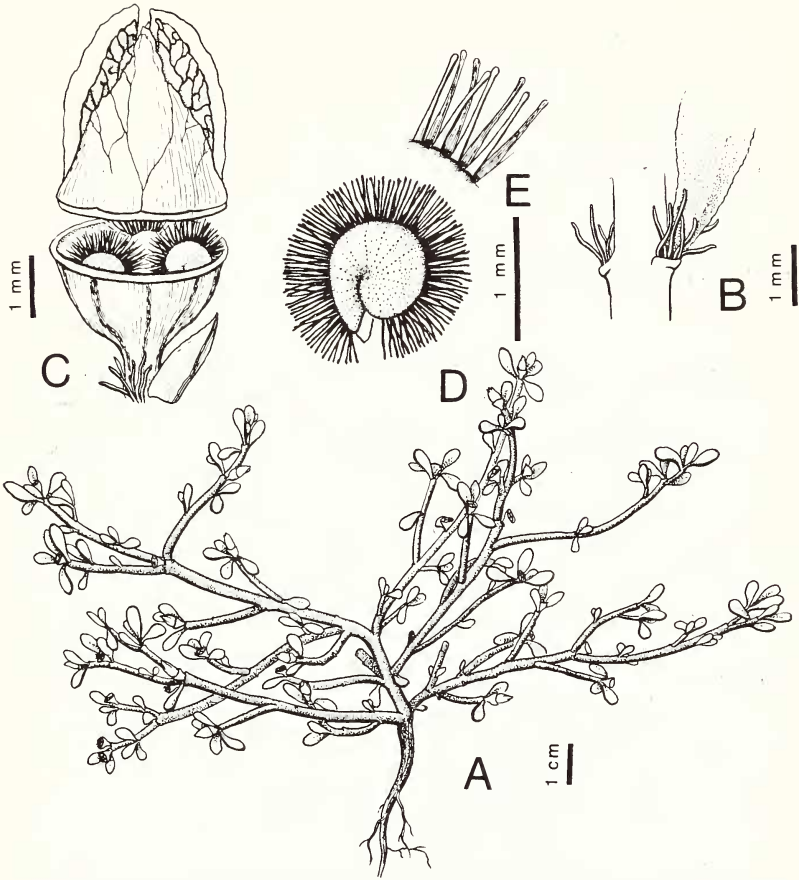


FIG. 1. *Portulaca johnstonii* Henrickson. A. Habit. B. Leaf base showing fimbriate white setae. C. Mature circumscissile capsule showing crested conical lid, seeds, subtending bract, and setae. D. Seed showing radiating fimbriae and small, white, basal caruncle. E. Detail of fimbriae 0.3–0.4 mm long on seed margin, showing their orientation into two rows.

vegetatively very similar to *P. retusa* Engelm. but is immediately distinguishable from this and all other species in the genus by the radiating fimbriae on the seeds. Both species are also very similar vegetatively to the widespread, weedy *P. oleracea* L.

Portulaca johnstonii, named for Marshall C. Johnston, grows in open, clay Tobosa flats with *Hilaria*, *Sporobolus*, *Ericameria*, and *Prosopis* in the Bolson de Mapimi region of the Chihuahuan Desert.

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